

ENDOPHYTIC BACTERIAL FLORA AS A MAIZE PEST PROTECTION AGENT.

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Isolates of non pathogenic endophytic bacteria were recovered from cultivars of healthy maize leaves at Embrapa Milho e Sorgo, Sete Lagoas, MG, Brazil. Cuttings of surface sterilized leaves were placed on selective plating medium and the isolates were recovered. Pure cultures of isolates were reinoculated in seeds and maize leaves to evaluate the capacity of leaves tissue colonization from the seeds and pathogenic effects. Non pathogenic isolates were morphologic and biochemically characterized. From 632 isolates originally recovered from maize leave plants, 64,3% were recovered from leaf vascular tissue and 35,7% were recovered from leaf tissue. Fourteen isolates from 160 endophytes were reisolated in the leaves after seed inoculation and pathogenic effects were not observed from these reisolates. The greatest number of isolates from leaf vascular tissue indicates that endophytic bacteria have intimate relationship with xylem tissues and has been shown to spread systemically throughout maize plants. In addition, their unique ability to survive inside plants makes them potential candidates for biological control of maize pests through the systemic delivery of biopesticide.